AMENDMENTS TO THE CLAIMS

The following is a complete listing of the claims indicating the current status of each claim and including amendments currently entered as highlighted.

1. (Currently Amended) A device for detecting malfunction of a gravity fed intravenous delivery system that includes a fluid reservoir, a fluid flow-rate valve, and tubing for delivery of the fluid from the container to a catheter, the catheter being inserted intravenously in a patient, the device comprising:

(a) a conduit body including:

(i) a housing configured for interconnection with the tubing, fluid flowing through an interior flow passage in said housing, said housing including at least one pressure release passage to allow the fluid to pass between said interior passage and a pressure-sensing region; and

(ii) an elastic non-permeable sheath deployed so as to circumscribe said housing such that said pressure-sensing region is located between an exterior wall of said housing and said sheath, wherein said sheath is configured such that, when a fluid pressure within said interior flow passage is less than atmospheric pressure, said sheath is pressed against said housing and, when a fluid pressure within said interior flow passage rises above atmospheric pressure, said sheath expands;

(b) a sensing mechanism deployed around said conduit body, said sensing mechanism including at least one sensor configured to discern the expansion of said sheath~~, said expansion being caused by an increase~~

~~of said fluid in said pressure-sensing region due to increased fluid pressure in the tubing and said housing~~; and

(c) an indication system coupled to said sensor.

2. (Original) The device of claim 1, wherein said housing has a shape such that the length of an outer periphery of a cross-section is substantially constant for any cross-section along the length of said housing.

3. (Original) The device of claim 1, wherein a cross-section of said housing taken at a point in either end region will have a substantially circular outer shape to facilitate interconnection with said tubing, and a cross-section taken at a point in a middle region will have a substantially elongated outer shape configured to provide a substantially flat area for said pressure-sensing region.

4. (Original) The device of claim 1, wherein said housing further includes a pattern of flow channels located in said pressure-sensing region substantially encircling an open end of said pressure-release passage, said flow channels being configured so as to facilitte diffusion of said fluid within said pressure-sensing region.

5. (Original) The device of claim 4, wherein said flow channels are formed between ridges that extend above a surface of said exterior wall.

6. (Original) The device of claim 1, wherein said sensor includes electrical contacts deployed around said conduit body.

7. (Original) The device of claim 6, wherein said discernment includes a change in status of said electrical contacts.

8. (Original) The device of claim 7, wherein said change in status includes the separation of said electrical contacts thereby opening an electrical circuit, said separation being caused by said expansion of said sheath.

9. (Original) The device of claim 1, wherein said sensing mechanism and indication system are housed in a clamp apparatus configured for repeated deployment, said deployment being around said conduit body.

10. (Original) The device of claim 1, wherein an audible indication is emitted by said indication system.

11. (Original) The device of claim 1, wherein a visual indication is emitted by said indication system.

12. (Original) The device of claim 1, wherein said sensing mechanism is battery powered.

13. (Original) The device of claim 1, wherein said indication system is battery powered.

14. (Currently Amended) A method for detecting malfunction of a gravity fed intravenous delivery system that includes a fluid reservoir, a fluid flow-rate valve,

and tubing for delivery of the fluid from the container to a catheter, the catheter being inserted intravenously in a patient, the method comprising:

(a) monitoring a direction of pressure difference between ambient atmospheric pressure and the fluid inside the tubing, said direction of pressure difference being monitored at a location chosen such that, during normal operation of the gravity fed intravenous delivery system, the pressure of the fluid is normally below atmospheric pressure ~~substantially proximal to and after the flow rate valve along a flow path of the intravenous delivery system~~; and

(b) activating an alarm when said pressure inside the tubing exceeds atmospheric pressure.

15. (Original) The method of claim 14, wherein said monitoring is accomplished by:

(a) interconnecting a conduit body with the tubing, said conduit body including:

(i) a housing configured for interconnection with the tubing, fluid flowing through an interior flow passage in said housing, said housing including at least one pressure release passage to allow the fluid to pass between said interior passage and a pressure-sensing region; and

(ii) an elastic non-permeable sheath deployed so as to circumscribe said housing such that said pressure-sensing region is located between an exterior wall of said housing and said sheath;

(b) deploying a sensing mechanism around said conduit body, said sensing mechanism including at least one sensor configured to discern the expansion of said sheath, said expansion being caused by an increase of said fluid in said pressure sensing region due to increased fluid pressure in the tubing and said housing, said sensing mechanism being further connected to an indication system.

16. (Original) The method of claim 15, wherein said discerning includes changing status of electrical contacts that are deployed around said conduit body, said electrical contacts being included in said sensing mechanism.

17. (Original) The device of claim 16, wherein said changing status includes separating said electrical contacts thereby opening an electrical circuit, said separation being caused by said expansion of said sheath.

18. (Currently Amended) The method of claim ~~14~~ 17, wherein said separation of said electrical contacts activates said indication system.

19. (Original) The method of claim 18, wherein said activation of said alarm causes the emittance of an audible indication.

20. (Original) The method of claim 18, wherein said activation of said alarm causes the emittance of a visual indication.

21. (Original) A system for the intravenous delivery of a fluid into a patient, the system comprising:

(a) the device of claim 1;

(b) tubing interconnected with a fluid flow-rate valve and said conduit body, so as to be a single unit;

(c) a fluid reservoir, configured for interconnection with a top termination of said tubing such that the path of fluid flow passes from said reservoir, through said flow-rate valve, said conduit body, and a remainder of said tubing;

(d) a catheter configured for interconnection with a bottom termination of said tubing; and

(e) a clamp apparatus housing said sensing mechanism and said indication system, said clamp apparatus configured for deployment around said conduit body.